



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,613	05/20/2002	Marc Charbonnaux	3732-0105P	6472
2292	7590	02/23/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			GRIER, LAURA A	
			ART UNIT	PAPER NUMBER
			2644	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,613

Applicant(s)

CHARBONNAUX ET AL.

Examiner

Laura A Grier

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/8/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/22/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the disclosure fails to provide a Brief Description of Drawings and Section Headings (please see below - *Arrangement of the Specification*). Appropriate correction is required.

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 7, 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakata, U. S. Patent No. 5388159.

Regarding claim 1, Sakata discloses an equalizing circuit for reproduced signals. Sakata's disclosure comprises a circuit coupled between an electric audio input signal and an output for reproduced audio, the circuit comprises a filter device for dividing the signal into a low frequency channel and a plurality of high frequency channels, of which, each channel (high frequency channel) comprises an electrical component for modifying amplitude and high frequency of an original electric audio signal (col. 2, lines 55-68 and col. 3, lines 1-4, col. 5, lines 46-68, and col. 7, lines 55-61; and figures 10, 14, and 16-17), which reads on an oscillator; wherein the processing of the circuit does not modify the general aspect of the original signal and provides minimum phase shift of the signal. Even though, Sakata discloses the reproduction of the audio signal and having an output. Sakata fails to disclose at least one electro-acoustic transducer. The examiner takes official notice that an electro-acoustical transducer was well

Art Unit: 2644

known in the art. Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Sakata by implementing an electro-acoustic transducer, such as a speaker/loudspeaker for the purpose of enabling adequate output of the audio signal as an acoustic sound for the listeners.

Regarding claim 2, Sakata discloses an equalizing circuit for reproduced signals. Sakata's disclosure comprises a circuit coupled between an electric audio input signal and an output for reproduced audio, the circuit comprises a filter device for dividing the signal into a low frequency channel and a plurality of high frequency channels, of which, each channel (high frequency channel) comprises an electrical component for modifying amplitude and high frequency of an original electric audio signal (col. 2, lines 55-68 and col. 3, lines 1-4, col. 5, lines 46-68, and col. 7, lines 55-61; and figures 10, 14, and 16-17), which reads on an oscillator; wherein the processing of the circuit does not modify the general aspect of the original signal and provides minimum phase shift of the signal. Even though, Sakata discloses the reproduction of the audio signal and having an output. Sakata fails to disclose at the equalizing circuit (oscillator) mounted between and power supply and least one electro-acoustic transducer. The examiner takes official notice that a power supply and an electro-acoustical transducer were well known in the art. Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Sakata by implementing circuitry between power supply of audio device and an electro-acoustic transducer (such as a speaker/loudspeaker) for the purpose of enabling adequate output of the audio signal as an acoustic sound for the listeners, and efficient processing of the audio signal via transmission to the transducer by the power lines as desired.

Art Unit: 2644

Regarding claim 11, Sakata discloses everything claimed as applied above (see claim 2). Sakata disclose a filter device (22) and the channels (high frequency channels) comprising band pass filters (figures 10, 14, and 16), which indicates passive components.

Regarding claim 4, Sakata discloses everything claimed as applied above (see claim 2). Sakata disclose the channels (high frequency channels) comprising attenuators (figures 10, 14, and 16), which indicates active components.

Regarding claim 10, Sakata discloses everything claimed as applied above (see claim 2). Sakata disclose each of the high frequency channels comprising band pass filters, attenuators, amplitude modulating circuits, and envelope detecting circuits (figures 10, 14, and 16), which indicates the same type of electric components on at least two parallel channels.

Regarding claim 3, Sakata discloses everything claimed as applied above (see claim 10). Sakata disclose the attenuators having different coefficient values, and further Sakata discloses the electronic components coupled along different frequency bands (col. 2, lines 59-60), and thus, it obvious that the electronic components would having different parameter values for accurate processing of the audio signal.

Regarding claim 12, Sakata discloses everything claimed as applied above (see claim 3). Sakata disclose a filter device (22) and the channels (high frequency channels) comprising band pass filters (figures 10, 14, and 16), which indicates passive components.

Regarding claim 7, Sakata discloses everything claimed as applied above (see claim 3). Sakata disclose the channels (high frequency channels) comprising attenuators (figures 10, 14, and 16), which indicates active components.

5. Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakata in view of Cox, U. S. Patent No. 4602337.

Regarding claim 5 and 8, respectively, Sakata discloses everything claimed as applied above (see claim 2 and 3, respectively). However, Sakata fails to specifically disclose the electric component comprising a microprocessor.

Regarding the microprocessor, Cox discloses the use of an equalizer with a microprocessor (abstract) that is used for controlling band gain among the different frequencies.

Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Sakata by implementing a microprocessor among the electronic components for the purpose gain control among the frequency bands as taught by Cox.

Response to Arguments

6. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

The applicant essentially provides arguments against the previous prior art rejections in respect the examiners interpretation and the 112 rejections, and now in respect the amended changes of the claims. The 112 rejections have been withdrawn. However, the objection of the specification is maintained as indicated in the Office Action above. The newly introduce reference of prior art, Sakata discloses a filter device which divides the audio signal into a plurality of channels, and an equalizing circuit for processing, filtering and modulating the electrical audio signal portion of the plurality of high frequency channels, which is located

between an electrical audio input signal and audio reproduction output, and wherein each high frequency channel comprises the same electronic components for enabling a small phase shift of the original audio signal without modifying the general aspects of the signal.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh N Tran can be reached on (703) 305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Laura A. Grier
February 21, 2005